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Manabu Kodate

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EXAMINER

PIZIALI, JEFFREY J

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/609,468	Applicant(s) KODATE ET AL.	
	Examiner Jeff Piziali	Art Unit 2629	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 22 October 2008 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ They raise the issue of new matter (see NOTE below);
- (c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
- The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: _____.
- Claim(s) objected to: _____.
- Claim(s) rejected: 4,5,8,16-18 and 21-28.
- Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

/Jeff Piziali/
 Primary Examiner, Art Unit 2629
 28 October 2008

Continuation of 3. NOTE:

The Applicant is thanked for the Amendment (filed 22 October 2008).

However, if entered, the Applicant's proposed claim amendment(s) in the Amendment (filed 22 October 2008) would newly introduce at least the limitations:

"a first switching device that controls the supply of the first display signal from the first data line to the first pixel electrode, the first switching device being driven based on a first scan signal from the scan signals supplied from the scan line driving circuit; a second switching device that controls the supply of the first display signal from the first data line to the second pixel electrode, the second switching device being driven based on a second scan signal from the scan signals supplied from the scan line driving circuit; and a third switching device that is driven based on the first scan signal, the third switching device controlling ON and OFF of the second switching device" to claim 18.

Such limitations if incorporated into present claim language would dramatically alter inventive scope of the claims, requiring additional search and consideration. Due to the proposed amendments not being entered, Applicant's arguments are not commensurate in scope with the current claims.

By such reasoning, non-entry of the proposed Amendment (filed 22 October 2008) is deemed proper and necessary at this time.

Additionally, Applicant's arguments filed 22 October 2008 are not persuasive.

The Applicant alleges, "the adjective 'predetermined' is clear and one with ordinary skill in the art would be apprised of its meaning" (see page 6). However, the examiner respectfully disagrees.

The claims are indefinite where they specify "a predetermined surface", since "predetermined," according to applicant's definition, merely means "determined beforehand." For example: It would be unclear to one having ordinary skill in the art who, or what, is intended to perform such a "determination." Furthermore, it would be unclear to an artisan precisely at what point in time such a "determination" is intended to be made. See *Joseph E. Seagram & Sons, Inc. V. Marzall, Comr. Pats.*, 84 USPQ 180 (Court of Appeals, District of Columbia).

The Applicant alleges, "the adjective 'substantially equal' is clear and one with ordinary skill in the art would be apprised of its meaning" (see page 6). However, the examiner respectfully disagrees.

The term "substantially equal" is a relative term which renders the claim indefinite. The term "substantially equal" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For example: It would be unclear to one having ordinary skill in the art what degree or range of equality precision is intended to be required before qualifying as "substantially equal". Does "99.9% equal" constitute "substantially equal"? How about 90%? Or 51%?

The Applicant alleges, "there is ample antecedent basis for this limitation because claim 4 (from which claim 5 depends) recites "a first wire electrically connected to one of the scan lines" (see page 7). However, the examiner respectfully disagrees.

Claim 5 recites the limitation "a potential of a scan line other than the one of the scan lines" (in line 2). There is insufficient antecedent basis for this limitation in the claim. For example: Insufficient antecedent basis exists for the one of the scan lines having a potential.

The Applicant alleges, "one with ordinary skill in the art would understand the relation between the display signals of claim 8 (display signals from one of the data lines) being a subset of the display signals of claim 4 (display signals supplied to all the data lines)" (see page 7). However, the examiner respectfully disagrees.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. An omitted structural cooperative relationship results from the claimed subject matter: "display signals" (in claim 8, line 3) and "display signals" (in claim 4, line 2). For example: It would be unclear to one having ordinary skill in the art what structural and/or operational relationship exists between the claimed "display signals" limitations. Is a single, identical set of "display signals" being claimed? Or are a plurality of different, distinct, and different sets of "display signals" being claimed?

The Applicant alleges, "there is ample antecedent basis for this [the display signals] limitation because claim 8 recites 'a first pixel electrode and a second pixel electrode that are supplied with display signals from one of the data lines' which provided the necessary antecedent basis for 'the display signals in the one of the data lines' and 'a third switching device that is connected to the one of the data lines, the third switching device controlling a supply of the display signals to the second pixel electrode'" (see page 8). However, the examiner respectfully disagrees.

Claim 8 recites the limitation "the display signals" (in lines 5 and 12). There is insufficient antecedent basis for this limitation in the claim. For example: It would be unclear to one having ordinary skill in the art whether each limitation recitation is intended to refer to the earlier claimed "display signals" (in claim 8, line 3) and/or "display signals" (in claim 4, line 2).

The Applicant alleges, "It appears that the [a potential of a scan line other than the one of the scan lines] objection is due to the phrase 'the one of the scan lines;' however, this feature has ample antecedent basis from claim 16 which recites 'the first wire being electrically connected to one of the scan lines'" (see page 8). However, the examiner respectfully disagrees.

Claim 17 recites the limitation "a potential of a scan line other than the one of the scan lines" (in line 2). There is insufficient antecedent basis for this limitation in the claim. For example: Insufficient antecedent basis exists for the one of the scan lines having a potential.

Due to the proposed amendments not being entered, Applicant's arguments pertaining to claim 18 are not commensurate in scope with the current claims.

Claims 4, 5, 8, 16-18, and 21-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. As a courtesy to the Applicant, the examiner has attempted to also make rejections over prior art -- based on the examiner's best guess interpretations of the invention that the Applicant is intending to claim. However, the indefinite nature of the claimed subject matter naturally hinders the Office's ability to search and examine the application. Any instantly distinguishing features and subject matter that the Applicant considers to be absent from the cited prior art is more than likely a result of the indefinite nature of the claims. The Applicant is respectfully requested to correct the indefinite nature of the claims, which should going forward result in a more precise search and examination.

The Applicant alleges, "Claims 4-5, 16-17, and 21-28 are rejected under 35 U.S.C. 102(a) as being anticipated by the Instant Applications' Admitted Prior Art ('the APA'). This rejection is traversed for at least the following reasons. Claim 4 recites, among other things, a plurality of data lines; a plurality of scan lines; a first wire electrically connected to one of the scan lines; a second wire; a second substrate; a liquid crystal layer disposed between the first and second substrates; and a spacer disposed between the first and second substrates. The spacer prescribes the thickness of the liquid crystal layer. The spacer is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer. Claim 16 recites similar and/or analogous features. The APA does not teach or suggest this combination of features" (see page 9). However, the examiner respectfully disagrees.

The AAPA discloses an image display element, comprising: a plurality of data lines to which display signals are applied (see the entire document, including Page 1, Line 19), the data lines being embedded in a first substrate [e.g., TFT array substrate]; a plurality of scan lines to which scan signals are applied (see the entire document, including Page 1, Line 19), the scan lines being embedded in the first substrate (see the entire document, including Page 1, Lines 10-25); a first wire [e.g., Fig. 6B; 32] electrically connected to one of the scan lines; a second wire [e.g., Fig. 6B; 33] arranged at a first distance of less than or equal to $10\mu\text{m}$ [e.g., Fig. 6A -- $L < 5\mu\text{m}$] from the first wire; a second substrate [e.g., Fig. 10; 48] that is disposed opposite to the first substrate at a second distance from the first substrate; a liquid crystal layer [e.g., Fig. 10; 50] disposed between the first and second substrates, the liquid crystal layer having a thickness; and a spacer [e.g., Fig. 6B; 34] disposed between the first and second substrates, the spacer prescribing the thickness of the liquid crystal layer, wherein the first wire has a predetermined surface [e.g., Fig. 6B; top surface of 32] that does not directly abut the first substrate, the predetermined surface of the first wire being disposed on a side [e.g., top side of the TFT array substrate] of the first substrate that directly abuts the liquid crystal layer (see the entire document, including Fig. 6B), wherein the second wire has a predetermined surface [e.g., Fig. 6B; top surface of 33] that does not directly abut the first substrate, the predetermined surface of the second wire being disposed on the side of the first substrate that directly abuts the liquid crystal layer, and wherein the spacer is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer (see the entire document, including Fig. 6B; Page 13, Line 8 - Page 14, Line 22); a data line driving circuit and a scan line driving circuit (see the entire document, including Page 1, Lines 10-25).

The Applicant alleges, "Claims 4-5, 16-17, and 21-28 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,904,056 ('Castleberry'), under 35 U.S.C. 103(a) as being unpatentable over Castleberry and the APA, or under 35 U.S.C. 103(a) as being unpatentable over the APA and Castleberry. These rejections are traversed for at least the following reasons. Claim 4 recites, among other things, a plurality of data lines; a plurality of scan lines; a first wire electrically connected to one of the scan lines; a second wire; a second substrate; a liquid crystal layer disposed between the first and second substrates; and a spacer disposed between the first and second substrates. The spacer prescribes the thickness of the liquid crystal layer. The spacer is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer. Claim 16 recites similar and/or analogous features. Castleberry, the APA, or any combination of Castleberry and the APA does not teach or suggest this combination of features." (see page 10). However, the examiner respectfully disagrees.

Castleberry discloses an image display element [e.g., liquid crystal display device], comprising: a data line driving circuit that supplies display signals to a plurality of data lines [e.g., Figs. 4A & 7; 32]; a scan line driving circuit that supplies scan signals to a plurality of scan lines [e.g., Figs. 4A & 7; 31]; a plurality of data lines [e.g., Figs. 4A & 7; 32] to which display signals are applied, the data lines being embedded in a first substrate [e.g., Fig. 3; 20]; a plurality of scan lines [e.g., Figs. 4A & 7; 31] to which scan signals are applied, the scan lines being embedded in the first substrate (see the entire document, including Fig. 4A); a first wire [e.g., Fig. 4A; 31; or alternatively Figs. 3 & 4D; 39] electrically connected to one of the scan lines; a second wire [e.g., Figs. 3 & 4A; 32] arranged at a first distance of less than or equal to $10\mu\text{m}$ from the first wire; a second substrate [e.g., Fig. 3; 38] that is disposed opposite to the first substrate at a second distance [e.g., Fig. 3; T] from the first substrate; a liquid crystal layer [e.g., Fig. 3; 50] disposed between the first and second substrates, the liquid crystal layer having a thickness [e.g., Fig. 3; T]; and a spacer [e.g., Figs. 3 & 4E; 40a] disposed between the first and second substrates, the spacer prescribing the thickness of the liquid crystal layer, wherein the first wire has a predetermined surface [e.g., Fig. 4A; top surface of 31; or alternatively Figs. 3 & 4D; top surface of 39] that does not directly abut the first substrate, the predetermined surface of the first wire being disposed on a side [e.g., Fig. 3; top side 20] of the first substrate that directly abuts the liquid crystal layer, wherein the second wire has a predetermined surface [e.g., Figs. 3 & 4A; top surface of 32] that does not directly abut the first substrate, the predetermined surface of the second wire being disposed on the side of the first substrate that directly abuts the liquid crystal layer, and wherein the spacer is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer (see the entire document, including Fig. 3; Column 5, Line 4 - Column 7; Line 44).

Should it be shown that Castleberry discloses a claimed feature [e.g., a first distance of less than or equal to $10\mu\text{m}$] with insufficient specificity: The AAPA discloses an image display element, comprising: a plurality of data lines to which display signals are applied (see the entire document, including Page 1, Line 19), the data lines being embedded in a first substrate [e.g., TFT array substrate]; a plurality of scan lines to which scan signals are applied (see the entire document, including Page 1, Line 19), the scan lines being embedded in the first substrate (see the entire document, including Page 1, Lines 10-25); a first wire [e.g., Fig. 6A; 32] electrically connected to one of the scan lines; a second wire [e.g., Fig. 6A; 33] arranged at a first distance of less than or equal to $10\mu\text{m}$ [e.g., Fig. 6A -- $L < 5\mu\text{m}$] from the first wire (see the entire document, including Page 13, Line 8 - Page 14, Line 22); a second substrate [e.g., Fig. 10; 48] that is disposed opposite to the first substrate at a second distance from the first substrate; a liquid crystal layer [e.g., Fig. 10; 50] disposed between the first and second substrates, the liquid crystal layer having a thickness; and a spacer [e.g., Fig. 10; 51] disposed between the first and second substrates, the spacer prescribing the thickness of the liquid crystal layer, wherein the first wire has a predetermined surface [e.g., Fig. 6A; top surface of 32; Fig. 10; top surface of 47] that does not directly abut the first substrate, the predetermined surface of the first wire being disposed on a side [e.g., top side of the TFT array substrate] of the first substrate that directly abuts the liquid crystal layer (see the entire document, including Fig. 10), wherein the second wire has a predetermined surface [e.g., Fig. 6A; top surface of 33] that does not directly abut the first substrate, the predetermined surface of the second wire being disposed on the side of the first substrate that directly abuts the liquid crystal layer (see the entire document, including Fig. 10; Page 21, Line 9 - Page 22, Line 14). Arguably, the AAPA neglects expressly disclosing the spacer is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer.

Castleberry and the AAPA are analogous art, because they are both from the shared field of liquid crystal display devices. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to use Castleberry's spacer [e.g., Figs. 3 & 4E; 40a] as the AAPA's spacer [e.g., Fig. 10; 51], so as to incorporate a spacer material and structure which also performs a light blocking function [e.g., Castleberry: Column 1, Lines 10-15], resulting in a spacer that is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer, as instantly claimed. It would have been obvious to one of ordinary skill in the art at the time of invention because all the claimed elements were known in the prior art and one skilled in the art could have combined Castleberry's teachings [e.g., light blocking spacers] with the AAPA's image display element as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of invention, because the substitution of one known spacer for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of invention, because the technique for improving (by providing light blocking functionality) this particular class of display device was part of the ordinary skill in the art, in view of the teaching of the technique for improvement in other situations. It would have been obvious to one of ordinary skill in the art at the time of invention, because this particular known light blocking spacer technique was recognized as part of the ordinary capabilities of one skilled in the art. It would have been obvious to one of ordinary skill in the art at the time of invention, because a person of ordinary skill has good reason to pursue the known options within his or her technical grasp (i.e., providing light blocking functionality spacers). If this leads to the anticipated success, it is likely the product is not of innovation but of ordinary skill and common sense. It would have been obvious to one of ordinary skill in the art at the time of invention, because design incentives or market forces provided a reason to make a light blocking spacer adaptation, and the invention resulted from application of the prior knowledge in a predictable manner. See *KSR International Co. v. Teleflex Inc.*, et al., Docket No. 04-1350 (U.S. 30 April 2007).

Moreover, it would have been obvious to one having ordinary skill in the art at the time of invention to use the AAPA's teaching of a wire-to-wire distance of less than or equal to $10\mu\text{m}$ [e.g., Fig. 6A -- $L < 5\mu\text{m}$] between Castleberry's wires, so as to minimize the size taken up by Castleberry's wiring. It would have been obvious to one of ordinary skill in the art at the time of invention because all the claimed elements were known in the prior art and one skilled in the art could have combined the AAPA's teachings [e.g., wire-to-wire distances] with Castleberry's image display element as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of invention, because the substitution of one known wire-to-wire distance for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of invention, because the technique for improving (by minimizing wire-to-wire distances) this particular class of display device was part of the ordinary skill in the art, in view of the teaching of the technique for improvement in other situations. It would have been obvious to one of ordinary skill in the art at the time of invention, because this particular known minimizing wire-to-wire distance technique was recognized as part of the ordinary capabilities of one skilled in the art. It would have been obvious to one of ordinary skill in the art at the time of invention, because a person of ordinary skill has good reason to pursue the known options within his or her technical grasp (i.e., placing wires closer together). If this leads to the anticipated success, it is likely the product is not of innovation but of ordinary skill and common sense. It would have been obvious to one of ordinary skill in the art at the time of invention, because design incentives or market forces provided a reason to make a minimized wire-to-wire distance adaptation, and the invention resulted from application of the prior knowledge in a predictable manner. See *KSR International Co. v. Teleflex Inc.*, et al., Docket No. 04-1350 (U.S. 30 April 2007).

The Applicant alleges, "Claims 4-5, 16-17, 21-22, 24, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the APA in view of U.S. Patent 5,150,239 ('Watanabe'). This rejection is traversed for at least the following reasons. Claim 4 recites, among other things, a plurality of data lines; a plurality of scan lines; a first wire electrically connected to one of the scan lines; a second wire; a second substrate; a liquid crystal layer disposed between the first and second substrates; and a spacer disposed between the first and second substrates. The spacer prescribes the thickness of the liquid crystal layer. The spacer is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer. Claim 16 recites similar and/or analogous features. The APA, Watanabe, or any combination thereof does not teach or suggest this combination of features." (see page 12). However, the examiner respectfully disagrees.

The AAPA discloses an image display element, comprising: a plurality of data lines to which display signals are applied (see the

entire document, including Page 1, Line 19), the data lines being embedded in a first substrate [e.g., TFT array substrate]; a plurality of scan lines to which scan signals are applied (see the entire document, including Page 1, Line 19), the scan lines being embedded in the first substrate (see the entire document, including Page 1, Lines 10-25); a first wire [e.g., Fig. 6A; 32] electrically connected to one of the scan lines; a second wire [e.g., Fig. 6A; 33] arranged at a first distance of less than or equal to $10\mu\text{m}$ [e.g., Fig. 6A -- $L < 5\mu\text{m}$] from the first wire (see the entire document, including Page 13, Line 8 - Page 14, Line 22); a second substrate [e.g., Fig. 10; 48] that is disposed opposite to the first substrate at a second distance from the first substrate; a liquid crystal layer [e.g., Fig. 10; 50] disposed between the first and second substrates, the liquid crystal layer having a thickness; and a spacer [e.g., Fig. 10; 51] disposed between the first and second substrates, the spacer prescribing the thickness of the liquid crystal layer, wherein the first wire has a predetermined surface [e.g., Fig. 6A; top surface of 32; Fig. 10; top surface of 47] that does not directly abut the first substrate, the predetermined surface of the first wire being disposed on a side [e.g., top side of the TFT array substrate] of the first substrate that directly abuts the liquid crystal layer (see the entire document, including Fig. 10), wherein the second wire has a predetermined surface [e.g., Fig. 6A; top surface of 33] that does not directly abut the first substrate, the predetermined surface of the second wire being disposed on the side of the first substrate that directly abuts the liquid crystal layer (see the entire document, including Fig. 10; Page 21, Line 9 - Page 22, Line 14).

Arguably, the AAPA neglects expressly disclosing the spacer is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer. However, Watanabe discloses a spacer [e.g., Fig. 1; 104, 105, 108, and 109 working in conjunction/unison] in direct physical contact with the entire predetermined surface of at least one of the first and second wires [e.g., Fig. 1; 102, 103] such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer [e.g., Fig. 1; 107] (see the entire document, including Column 3, Lines 17-25).

The AAPA and Watanabe are analogous art, because they are both from the shared field of liquid crystal display devices. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to use Watanabe's spacer [e.g., Fig. 1; 104, 105, 108, and 109 working in conjunction/unison] as the AAPA's spacer [e.g., Fig. 10; 51], so as to the entire panel uniformly with a prescribed gap and for fixing the alignment of the pair of substrates, resulting in a spacer that is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer, as instantly claimed.

The Applicant alleges, "Adding bologna between two slices of bread (the substrates) does not prescribe the overall distance between the two slices" (see the footnote on page 13). However, the examiner respectfully disagrees.

Respectfully speaking, the Applicant's above statement exhibits a considerable lack of understanding and expertise in the art of sandwich manufacture. An artisan would in all likelihood consider the Applicant's statements in this regard to constitute, "a pile of bologna."

The Applicant alleges, "The PTO provides six rationales for making the proposed combination on pages 28-29 of the Office Action, which are all improper, because they are conclusory in nature and provide no factual basis or articulated reasoning contrary to MPEP 2142 and the case law" (see page 14). However, the examiner respectfully disagrees.

The AAPA and Watanabe are analogous art, because they are both from the shared field of liquid crystal display devices. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to use Watanabe's spacer [e.g., Fig. 1; 104, 105, 108, and 109 working in conjunction/unison] as the AAPA's spacer [e.g., Fig. 10; 51], so as to the entire panel uniformly with a prescribed gap and for fixing the alignment of the pair of substrates, resulting in a spacer that is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer, as instantly claimed. It would have been obvious to one of ordinary skill in the art at the time of invention because all the claimed elements were known in the prior art and one skilled in the art could have combined Watanabe's teachings [e.g., uniform spacers] with the AAPA's image display element as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of invention, because the substitution of one known spacer for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of invention, because the technique for improving (by providing increased uniformity and insulative functionality) this particular class of display device was part of the ordinary skill in the art, in view of the teaching of the technique for improvement in other situations. It would have been obvious to one of ordinary skill in the art at the time of invention, because this particular known accurate gap spacer forming technique was recognized as part of the ordinary capabilities of one skilled in the art. It would have been obvious to one of ordinary skill in the art at the time of invention, because a person of ordinary skill has good reason to pursue the known options within his or her technical grasp (i.e., providing wire insulating spacers). If this leads to the anticipated success, it is likely the product is not of innovation but of ordinary skill and common sense. It would have been obvious to one of ordinary skill in the art at the time of invention, because design incentives or market forces provided a reason to make a entire wire insulating spacer adaptation, and the invention resulted from application of the prior knowledge in a predictable manner. See *KSR International Co. v. Teleflex Inc.*, et al., Docket No. 04-1350 (U.S. 30 April 2007).

/Jeff Piziali/
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